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10/736,682	12/17/2003	Katsuhiro Yamanaka	2003_1856	4133

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EXAMINER
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THEXTON, MATTHEW

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 03/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/736,682	<b>Applicant(s)</b> YAMANAKA ET AL.	
	<b>Examiner</b> Matthew A. Thexton	<b>Art Unit</b> 1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 10/182,773.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>four sheets</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The IDSs submitted 2003 December 17, 2005 January 21, and 2005 April 11 has(have) been considered. Duplicate citation(s) has(have) been lined through, retaining the earliest filed citation(s).

The foreign language documents submitted with English language abstracts have only been considered to the extent they are understood from said abstracts.

### ***Arrangement of the Specification***

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or  
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.

Art Unit: 1714

- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

### ***Specification***

The abstract of the disclosure is objected to because it consists of two paragraphs. Correction is required. See MPEP § 608.01(b).

The disclosure is objected to because of the following informalities: Page 1, line 17, the word "use" should be - - used - -.

Appropriate correction is required.

### ***Claims Version***

The listing of claims submitted in the paper filed 2003 December 17 has been examined.

### ***Claims Analysis***

Claim 1 is directed to flame retardant containing mixtures comprising:

- (A) 100 parts by weight of a resin which includes HIPS having a reduced viscosity within stated values; and

Art Unit: 1714

(B) 1 to 50 parts by weight of dibenzyl pentaerythritol diphosphonate;  
wherein the mixtures have retention of a heat distortion temperature under load  
of at least 95% relative to (A) alone.

Claim 2 depends from claim 1 and requires a flame retardancy level of at least V-  
2 (UL94).

Claim 3 depends from claim 1 and further specifies:

(C) 1-100 parts by weight based on 100 parts by weight of (B) of at least  
one of red phosphorus or of among 4 specified types of phosphorus  
containing organic compounds.

Claim 4 depends from claim 1 and further specifies:

(D) 0.01-3 parts by weight based on 100 parts by weight of (A) of dicumyl.

Independent claim 5 is directed to flame retardant containing mixtures  
comprising:

- (A) as in claim 1;
- (B) as in claim 1; and
- (C) as in claim 3. No HDT property is specified.

Independent claim 6 is directed to flame retardant containing mixtures  
comprising:

- (A) as in claim 1;
- (B) as in claim 1;

Art Unit: 1714

(C) as in claim 3; and

(D) as in claim 4. No HDT property is specified.

### ***Claim Objections***

Claims 1 and 3 are objected to because of the following informalities: In claim 1, line 11 thereof, counting the structure as one line, an extraneous period is found after "95%" and in claim 3, line 6 thereof, at the end of this line is an extraneous period. Appropriate correction is required.

Claims 1-6 are objected to under 37 CFR 1.75(i) as being in improper form because each of a plurality of elements or steps of the claim should be separated by a line indentation. See MPEP § 608.01(m).

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Each of independent claims 1, 5, and 6 employs the phrase "which substantially comprises a high impact polystyrene." This is not understood. The limitation "substantially" as modifying "comprising" does not distinctly claim the amount of HIPS. Since the use of the limitation "substantially" is purposeful, it

Art Unit: 1714

is concluded it is not extraneous. However, it is not clear how "substantially comprising" is differentiating from "comprising."

Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear to what component is referred by the phrase "having a reduced viscosity...."

Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is thought that the conditions for measuring the HDT affect the value obtained, and thus the conditions, such as the ASTM, must be specified in order that the values and the retention are to have meaning (see specification, page 20, lines 4-10, page 28, lines 6-17).

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Art Unit: 1714

Claims 1-6 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 17, 39-43, 53, and 54 of copending Application No. 10476390. Although the conflicting claims are not identical, they are not patentably distinct from each other because the same components are recited, particularly claim 17 of '390 recites 45 permutations of pentaerythritol diphosphonates which include the one of the present claims and the recitation of additional component(s) in '390 is encompassed by the present claims which are "comprising." Properties are inherent to the obvious mixtures.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-6 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-24 and 39 of copending Application No. 11152372. Although the conflicting claims are not identical, they are not patentably distinct from each other because the same components are recited, particularly the independent claims among those indicated of '372 recite 45 permutations of pentaerythritol diphosphonates which include the one of the present claims and claim 12 recites 4 isomers of which one is the same as the one of the present claims, and the recitation of additional component(s) in '372 is encompassed by the present claims which are "comprising." Properties are inherent to the obvious mixtures.



Art Unit: 1714

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

**35 USC § 102 and 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

### ***Claim Rejections***

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Granzow (US 4162278).

The present claims are broadly discussed hereinabove in the section ***Claims Analysis*** which is incorporated by reference.

The reference '278 discloses mixtures comprising rubber-modified HIPS, and specific pentaerythritol phosphonate compounds incorporated at 8% by weight in Example 3. Compound C is the same as in Applicant's claims. The reduced viscosity and heat distortion temperatures are not reported, such are inherent properties dependent upon the HIPS and there is no evidence that the '278 mixtures do not have them. With respect to claim 2, although the examples in Example 3 are said to fail the flammability test, the test of '278 employed different metrics than Applicant's (page 27, lines 7-16), and there is no evidence that the reference mixtures would fail Applicant's metrics.

The reference '278 discloses mixtures comprising polyphenylene ether, rubber-modified HIPS, and specific pentaerythritol phosphonate compounds incorporated at 4, 6, and 8% by weight. Compound C is the same as in Applicant's claims. The reduced viscosity and heat distortion temperatures are not reported, such are inherent properties dependent upon the HIPS and there is no evidence that the '278 mixtures do not have them. With respect to claim 2, flammability according to UL94 with different metrics than Applicant's (page 27, lines 7-16) are reported in Tables I and III, and there is no

Art Unit: 1714

evidence that the reference mixtures would fail Applicant's metrics. Applicant's claims are comprising and thus encompass additional components such as PPE.

In the event the reference is deemed to be of not sufficient specificity to sustain a conclusion of anticipation, then it is concluded that it would have been obvious to one of ordinary skill in the art at the time of the invention to have sought the reduced viscosity range and the retention of heat distortion temperature for industrial applications calling for such properties. Further, it would have been obvious to one of ordinary skill in the art at the time of the invention to have employed more of the phosphonate in order to obtain better flammability properties, substantially as Applicant has done in example 22, which employs 15 parts by weight of flame retardant.

Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Granzow (US 4162278) as applied to claim 1 above, and further in view of Official Notice.

The present claims are broadly discussed hereinabove in the section **Claims Analysis** which is incorporated by reference. '278 is discussed above, which discussion is incorporated by reference. '278 does not disclose the further addition of one or more phosphorus containing flame retardants, as required in Applicant's claims 3 and 5.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have employed the further addition of one or more phosphorus containing

flame retardants because they are known to be useful for the same utility; such co-use flows naturally from their recognized common utility.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Granzow (US 4162278) as applied to claim 1 above, and further in view of Honl et al. (DE 19648799, as represented by US 6124385).

The present claims are broadly discussed hereinabove in the section **Claims Analysis** which is incorporated by reference. '278 is discussed above, which discussion is incorporated by reference. '278 does not disclose the further addition of dicumyl, as required in Applicant's claim 4.

The reference '385 discloses that free-radical generators such as dicumyl is known to improve the flame retardancy of polymers. Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to have employed them in the mixtures of '287 and thus arrived at the subject matter encompassed by claim 4.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Granzow (US 4162278) further in view of Honl et al. (DE 19648799, as represented by US 6124385) and further in view of Official Notice.

The present claims are broadly discussed hereinabove in the section **Claims Analysis** which is incorporated by reference. '278 is discussed above in the rejection of claims 1 and 2, which discussion is incorporated by reference. '278 does not disclose

Art Unit: 1714

the further addition of dicumyl, as required in Applicant's claim 6. '278 does not disclose the further addition of one or more phosphorus containing flame retardants, as required in Applicant's claim 6.

The reference '385 discloses that free-radical generators such as dicumyl is known to improve the flame retardancy of polymers. Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to have employed them in the mixtures of '287. It would have been obvious to one of ordinary skill in the art at the time of the invention to have employed the further addition of one or more phosphorus containing flame retardants because they are known to be useful for the same utility; such co-use flows naturally from their recognized common utility.

Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as obvious over Axelrod (US 4520152).

The present claims are broadly discussed hereinabove in the section ***Claims Analysis*** which is incorporated by reference.

The reference '152 discloses mixtures comprising polyphenylene ether, rubber-modified HIPS (column 2, lines 51-53), and specific pentaerythritol phosphonate compounds, including benzyl substituted (column 2, lines 62-68), as in Applicant's claims. The reduced viscosity and heat distortion temperatures are not reported. With respect to claim 2, flammability according to UL94 with different metrics than Applicant's (page 27, lines 7-16) are reported in Table. Applicant's claims are comprising and thus encompass additional components such as PPE.

Art Unit: 1714

It would have been obvious to one of ordinary skill in the art at the time of the invention to have employed the benzyl specie in light of the plain suggestion to do so. It would have been obvious to one of ordinary skill in the art at the time of the invention to have sought the reduced viscosity range and the retention of heat distortion temperature for industrial applications calling for such properties, particular since HDT is measured in '152 (see Table) and impact resistance is noted as a desirable engineering property (column 1, lines 45-50).

Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Axelrod (US 4520152) as applied to claim 1 above, and further in view of Official Notice.

The present claims are broadly discussed hereinabove in the section **Claims Analysis** which is incorporated by reference. '152 is discussed above, which discussion is incorporated by reference. '152 does not disclose the further addition of one or more phosphorus containing flame retardants, as required in Applicant's claims 3 and 5.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have employed the further addition of one or more phosphorus containing flame retardants because they are known to be useful for the same utility; such co-use flows naturally from their recognized common utility.

Art Unit: 1714

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Axelrod (US 4520152) as applied to claim 1 above, and further in view of Honl et al. (DE 19648799, as represented by US 6124385).

The present claims are broadly discussed hereinabove in the section **Claims Analysis** which is incorporated by reference. '152 is discussed above, which discussion is incorporated by reference. '152 does not disclose the further addition of dicumyl, as required in Applicant's claim 4.

The reference '385 discloses that free-radical generators such as dicumyl is known to improve the flame retardancy of polymers. Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to have employed them in the mixtures of '152 and thus arrived at the subject matter encompassed by claim 4.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Axelrod (US 4520152) further in view of Honl et al. (DE 19648799, as represented by US 6124385) and further in view of Official Notice.

The present claims are broadly discussed hereinabove in the section **Claims Analysis** which is incorporated by reference. '152 is discussed above in the rejection of claims 1 and 2, which discussion is incorporated by reference. '152 does not disclose the further addition of dicumyl, as required in Applicant's claim 6. '152 does not disclose the further addition of one or more phosphorus containing flame retardants, as required in Applicant's claim 6.

Art Unit: 1714

The reference '385 discloses that free-radical generators such as dicumyl is known to improve the flame retardancy of polymers. Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to have employed them in the mixtures of '152. It would have been obvious to one of ordinary skill in the art at the time of the invention to have employed the further addition of one or more phosphorus containing flame retardants because they are known to be useful for the same utility; such co-use flows naturally from their recognized common utility.

Claims 1-3 and 5 are rejected under 35 U.S.C. 103(a) as obvious over Mawatari et al. (JP 60-79048A, as evidenced by USPTO obtained translation).

The present claims are broadly discussed hereinabove in the section ***Claims Analysis*** which is incorporated by reference.

The reference '048 (citations will refer to the translation pages and lines) discloses mixtures comprising polyphenylene ether, rubber-modified HIPS (page 5, last full paragraph through page 11, last full paragraph and pages 26-29), and specific pentaerythritol phosphonate compounds, including benzyl substituted (page 21, last five lines), as in Applicant's claims. The reduced viscosity and heat distortion temperatures are not reported. With respect to claim 2, flammability according to UL94 with different metrics than Applicant's (page 27, lines 7-16) are reported in Table 1. Applicant's claims are comprising and thus encompass additional components such as PPE.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have employed the benzyl specie in light of the plain suggestion to do so. It



Art Unit: 1714

would have been obvious to one of ordinary skill in the art at the time of the invention to have sought the reduced viscosity range and the retention of heat distortion temperature for industrial applications calling for such properties, particular since heat resistance is measured in '048 (see Table), as are impact resistance and tensile strength. It would have been obvious to one of ordinary skill in the art at the time of the invention to have employed the benzyl specie in combination with other suggested organo-phosphorus compounds (page 20-22) which include species set forth in Applicant's claims 3 and 5 because they are disclosed to be useful for the same utility; such co-use flows naturally from their recognized common utility.

Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mawatari et al. (JP 60-79048A, as evidenced by USPTO obtained translation) as applied to claim 1 above, and further in view of Honl et al. (DE 19648799, as represented by US 6124385).

The present claims are broadly discussed hereinabove in the section **Claims Analysis** which is incorporated by reference. '048 is discussed above, which discussion is incorporated by reference. '048 does not disclose the further addition of dicumyl, as required in Applicant's claims 4 and 6.

The reference '385 discloses that free-radical generators such as dicumyl is known to improve the flame retardancy of polymers. Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to have employed

Art Unit: 1714

them in the mixtures of '048 and thus arrived at the subject matter encompassed by claims 4 and 6.

***Citation of Pertinent Prior Art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

USPTO obtained translation of JP 61-9450A is cited to complete the record because the JPO abstract was cited in the parent patent application.

Derwent machine-assisted translation of JP 9-241422A is cited to complete the record; the abstract having been cited by Applicant.

JPO machine translation of JP 8-176396 is cited to complete the record; the abstract having been cited by Applicant. The importance of the parameters heat resistance, impact resistance, fluidity, reduced viscosity, and flame retardancy is discussed.

Derwent machine-assisted translation of JP 6-179823A is cited to complete the record; the abstract having been cited by Applicant. The importance of the parameter reduced viscosity is discussed [0022].

Derwent machine-assisted translation of JP 5-295249A is cited to complete the record; the abstract having been cited by Applicant. The importance of the parameter reduced viscosity is discussed [0039]- [0040].

Derwent machine-assisted translation of JP 6-179823A is cited to complete the record; the abstract having been cited by Applicant.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew A. Thexton whose telephone number is 571-272-1125. The examiner can normally be reached on Tuesday-Friday, 9:30 to 7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasudevan S. Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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